

**Instructions for Supplemental Application Form**  
**SITE REMEDIATION EQUIPMENT**  
(Instructions for completing DEP-AIR-APP-209)

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All applicants for a permit for a stationary source, as defined in Section 22a-174-1 of the Regulations of Connecticut State Agencies (RCSA), must complete the appropriate supplemental application forms to provide information to quantify the emissions from each source or point of emissions which makes up that stationary source.

This supplemental application form must be completed for any new or modified soil/water remediating equipment which releases emissions to the atmosphere, such as: low temperature thermal desorbers, air strippers, and other soil vapor extractors.

An installation shall consist of all equipment necessary to remediate the soil/water and may include, but not be limited to: primary treatment unit; secondary treatment unit; soil storage and handling areas; fans; etc.

Please complete a separate form for each unit of an installation. (You may reproduce this form as necessary.) Complete each item as appropriate. If a particular item does not apply to your situation mark it N/A (not applicable). If additional space is needed to answer a question stated in the application, attach separate sheet(s) as necessary, clearly identifying the applicant name, form name and item number, and unit number. *Attach a process flow diagram indicating all units, air pollution control equipment and stacks, as applicable. See a sample process flow diagram in the main instructions (DEP-AIR-INST-200) for guidance. Also, submit documentation, such as pilot test data, which characterizes the site's degree of contamination.*

You must also complete the *Air Pollution Control Equipment* form (DEP-AIR-APP-210) to provide details of the air pollution control equipment used, the *Stack Parameters* form (DEP-AIR-APP-211) to provide parameters of the stack(s) associated with each unit, and the *Unit Emissions* form (DEP-AIR-APP-212) to provide emission rates of each unit. Include details of secondary treatment unit and any control equipment used for enclosed contaminated storage piles, in the case of a low temperature thermal desorption unit, for example.

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**Unit Number:** Identify the reference or unit number assigned to each unit of an installation. Use the same numbering system that was used in completing Part I: Application and Source Type of the form *Permit Application for New Source Review Stationary Sources of Air Pollution* (DEP-AIR-APP-200). Please use a consistent reference number for each unit of an installation throughout the application package. Please complete a separate form for each unit of an installation.

Indicate (AYes@ or ANo@) whether the unit is subject to Title 40 of the Code of Federal Regulations (CFR) Part 60, New Source Performance Standards (NSPS) or Title 40 CFR Part 63, Maximum Achievable Control Technology (MACT). If the answer is yes to either Part 60 or Part 63, please specify the appropriate subparts.

## Section I: General

1a-c. *Manufacturer, Model Number and Serial Number* - List the manufacturer, model number and serial number of the equipment. This information is specified by the manufacturer and can often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer.

2. *Construction Date* - List the unit's actual or anticipated construction date. Please refer to the definition of **Begin actual construction** in RCSA Section 22a-174-1 in order to properly complete this item.

3. *Type of Remediation Process* - Indicate the type of remediation process to be used (e.g., in-situ, etc.).

4. *Type of Equipment* - Indicate the type of equipment. A stationary plant is one that is anchored to a slab or a structure of bedrock. A portable plant is one that is mounted on a chassis or skids and may be moved from site to site. If portable, indicate its initial location.

5. *Type of Contaminants and Concentrations* - Specify *all* types of contaminants in the soil/water to be remediated (e.g., gasoline, 1,1,1-trichloroethane, coal tar, diesel fuel, etc.). Include other soil or water contaminants (those which are not petroleum hydrocarbons) to be treated, and their concentrations in parts per million by weight (ppmw) (e.g., metals, solvents, coal tar, etc.). *Also, submit documentation, such as pilot test data, which characterizes the site's degree of contamination.* If additional space is needed to answer this item, attach a separate sheet as necessary, clearly identifying the applicant name, form name and item number, and unit number.

6. *Operating Schedule* - Estimate your maximum operating schedule in hours per day and hours per year.

7. *Percent of Annual Throughput* - Estimate the *percentage* of total annual throughput for each quarter of the year as indicated, if applicable. Throughput refers to the amount of soil/water processed.

## Section II: Low Temperature Thermal Desorbers Only

### Part A: Primary Treatment Unit

Note: The primary treatment unit is the piece of equipment in which the soil is heated to drive off VOC's.

Information for items 1-5 can be obtained from the plant manufacturer or builder.

1. *Maximum Soil Throughput* - Indicate the maximum *design* hourly throughput of the primary treatment unit in tons per hour. Throughput refers to the amount of soil processed.

2. *Drum Speed Range* - Indicate the primary treatment unit's drum speed in revolutions per minute (RPM) under typical operating conditions.

3. *Soil Residence Time Range* - Indicate the *anticipated* soil residence time in minutes. This refers to the range of time that the soil remains in the primary treatment unit.

4. *Operating Temperature Range* - Indicate the primary treatment unit's operating temperature range in °F.

5. *Expected Soil Entrainment Rate* - Indicate the anticipated soil entrainment rate in pounds per hour. This refers to the rate of solids that, as a result of heating in the primary treatment unit, are entrained in the gases which are exhausted to the particulate control equipment.

6a. *Maximum Total Petroleum Hydrocarbon Rate* - If *applicable*, indicate the *maximum* total petroleum hydrocarbon concentration, in parts per million by weight (ppmw), of

soils entering the primary treatment unit to be processed, at the unit's maximum rated capacity (MRC).

- 6b. *Anticipated Total Petroleum Hydrocarbon Rate* Also indicate the *anticipated* total petroleum hydrocarbon concentration, in ppmw, which will be processed at the unit's expected soil throughput, if different than 6a. Specify this throughput in tons per hour.
7. *Soil Moisture Content Range* - Indicate the range of soil moisture content in percent by weight, as treated by the primary treatment unit.
- 8a,b. *Storage Piles* - For *both* contaminated and *treated* soil storage piles, indicate by a checkmark if the piles are: 1) enclosed, e.g., six sided bin, negative pressure building, etc.; 2) covered, e.g., tarps, foam, etc.; 3) contained by other means, e.g., wet dust suppression, etc.; or, 4) not contained at all. If other means are used, please specify the type.
9. *Soil Blending?* - Check ("Yes" or "No") whether the *contaminated* soil will be blended with other soil prior to treatment.

### ***Part B: Primary Treatment Unit Auxiliary Burner System***

1. *Number of Burners* - Indicate the number of burners in the primary treatment unit.
2. *Burner Manufacturer and Model Number* - Specify the burner manufacturer and model number for all burners listed.
3. *Maximum Heat Input* - Indicate the burner's maximum design heat input in BTU per hour. This information is specified by the manufacturer and can often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer.

- 4a. *Fuel Type(s)* - List all fuel types to be used for firing the primary treatment unit (e.g., natural gas, propane, fuel oil, etc.). If additional space is needed to answer this item, attach a separate sheet, as necessary, clearly identifying the applicant name, form name and item number, and unit number.
- 4b-d. *Percent Ash, Sulfur and Nitrogen* - For each fuel to be used, list the fuel's maximum sulfur, nitrogen, and ash contents by percent weight on a dry basis. These can be obtained from your fuel dealer. Note: The legal maximum limit for fuel sulfur content in Connecticut is 0.3% for No. 2 heating oil and No. 2 off-road diesel fuel, and 1% for all other heating fuels. Lower percentages may be required if adverse ambient impacts are predicted, BACT requirements are not met, a hazardous air pollutant violation exists, or if an emission standard cannot be met.
- 4e. *Heating Value* - Indicate each fuel's higher heating value in BTU per unit. Specify the measurement units, e.g., BTU per gallon. These can be obtained from your fuel dealer or standard reference texts.
- 4f. *Annual Usage* - For each fuel to be used, estimate the maximum anticipated annual fuel usage rates and specify the measurement units, e.g., MMcf/year.

### **Section III: Air Strippers Only**

1. *Number of Wells* - Specify the number of wells to be drilled to remediate the site.
2. *Maximum Flow Rate* - Indicate the maximum groundwater flow rate in gallons per minute through the stripping device. This information is specified by the manufacturer and can often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer.

3. *Stripping Rate* - Indicate the maximum stripping rate of VOC's in pounds per hour, i.e., the rate of VOC's exhausted to control equipment or the atmosphere, as applicable.

#### **Section IV: Soil Vapor Extraction Only**

1. *Number of Wells* - Specify the number of wells to be drilled to remediate the site.
2. *Maximum Fan Capacity* - Indicate the maximum fan capacity in acfm. This information is specified by the manufacturer and can often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer.
3. *Stripping Rate* - Indicate the maximum extraction rate of VOC's in pounds per hour, i.e., the rate of VOC's exhausted to control equipment or the atmosphere, as applicable.